



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

MAR 26 2004

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of
Tennessee Valley Authority

)
)

Docket No. 50-390

WATTS BAR NUCLEAR PLANT (WBN) - 2003 ANNUAL OCCUPATIONAL
RADIATION EXPOSURE REPORT

Enclosed is the 2003 Annual Occupational Radiation Exposure Report. This report contains a summary of occupational exposure data for the period of January 1, 2003, to December 31, 2003. Submittal of this report fulfills the requirements of Technical Specification 5.9.1.

There are no regulatory commitments in this submittal and should there be questions regarding this letter, please telephone me at (423) 365-1824.

Sincerely,

P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosure
cc: See page 2

JES4

U.S. Nuclear Regulatory Commission

Page 2

MAR 26 2004

Enclosure

cc (Enclosure):

NRC Resident Inspector
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

Ms. M. H. Chernoff, Project Manager
U.S. Nuclear Regulatory Commission
MS 08G9
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2738

U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

REIRS Project Manager
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
MS T-9F31
Washington, D.C. 20555

ENCLOSURE

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT UNIT 1

2003 ANNUAL OCCUPATIONAL RADIATION EXPOSURE REPORT

JANUARY 1, 2003 TO DECEMBER 31, 2003

UNIT 1
DOCKET NUMBER 50-390
LICENSE NUMBER NPF-90

WATTS BAR NUCLEAR PLANT (WBN)

2003 ANNUAL OCCUPATIONAL RADIATION EXPOSURE REPORT

Occupational Exposure Data:

Enclosed is the exposure data for personnel at WBN that received greater than 100 millirem between January 1, 2003 and December 31, 2003. The major special maintenance tasks for which exposure data is provided includes:

- The inspection, modification and repair of the transfer canal system.
- The inspection and leak detection of the transfer canal.
- The inspection of the fuel top nozzle and lock tube.
- The modification of the cask loading area for tritium consolidation.
- The removal and replacement of incore thimble tubes.
- The removal of a fuel assembly lodged in the upender and the retrieval of a broken T-bar.

PO BOX 2000
 SPRING CITY, TN, 37381
 LICENSE: NPP-90, SNM-1873

Regulatory Guide 1.16 Information
 End of Year Report 2003

Work and Job Function	Number of Personnel > 100 mrem			Total man-rem *		
	Station	Utility	Contractor	Station	Utility	Contractor
ROUTINE OPERATIONS AND SURVEILLANCE						
MAINTENANCE PERSONNEL	0.612	0.000	7.966	0.283	0.000	2.310
OPERATIONS PERSONNEL	12.206	0.000	0.000	1.796	0.000	0.000
HEALTH PHYSICS PERSONNEL	6.676	2.476	18.096	1.474	0.327	4.083
SUPERVISORY PERSONNEL	1.733	0.000	0.000	0.283	0.000	0.000
ENGINEERING PERSONNEL	3.418	1.050	0.500	0.634	0.119	0.072
ROUTINE PLANT MAINTENANCE						
MAINTENANCE PERSONNEL	16.452	10.925	208.353	3.255	1.814	48.123
OPERATIONS PERSONNEL	2.143	0.000	0.000	0.338	0.000	0.000
HEALTH PHYSICS PERSONNEL	6.009	1.205	4.531	1.463	0.170	1.633
SUPERVISORY PERSONNEL	2.561	0.138	0.067	0.570	0.027	0.012
ENGINEERING PERSONNEL	3.994	0.272	6.895	1.178	0.031	1.175
INSERVICE INSPECTION						
MAINTENANCE PERSONNEL	3.295	1.610	107.205	0.860	0.211	35.773
OPERATIONS PERSONNEL	4.820	0.000	0.000	1.293	0.000	0.000
HEALTH PHYSICS PERSONNEL	1.681	1.196	15.325	0.536	0.157	4.453
SUPERVISORY PERSONNEL	4.345	1.000	1.933	1.206	0.224	1.142
ENGINEERING PERSONNEL	0.713	2.377	8.192	0.118	0.574	1.715
SPECIAL PLANT MAINTENANCE						
MAINTENANCE PERSONNEL	0.007	0.000	2.961	0.001	0.000	0.921
OPERATIONS PERSONNEL	0.121	0.000	0.000	0.039	0.000	0.000
HEALTH PHYSICS PERSONNEL	1.334	0.000	0.105	0.191	0.000	0.024
SUPERVISORY PERSONNEL	0.027	0.000	0.000	0.003	0.000	0.000
ENGINEERING PERSONNEL	0.000	0.036	0.246	0.000	0.004	0.061
WASTE PROCESSING						
MAINTENANCE PERSONNEL	0.752	0.170	2.052	0.147	0.019	0.371
OPERATIONS PERSONNEL	0.000	0.000	0.000	0.000	0.000	0.000
HEALTH PHYSICS PERSONNEL	0.964	0.000	1.435	0.193	0.000	0.233
SUPERVISORY PERSONNEL	0.000	0.000	0.000	0.000	0.000	0.000
ENGINEERING PERSONNEL	0.016	0.000	0.000	0.007	0.000	0.000
REFUELING						
MAINTENANCE PERSONNEL	2.883	1.295	59.462	0.590	0.148	19.955
OPERATIONS PERSONNEL	3.710	0.000	0.000	1.213	0.000	0.000
HEALTH PHYSICS PERSONNEL	1.340	0.123	6.509	0.270	0.016	1.487
SUPERVISORY PERSONNEL	1.334	0.862	0.000	0.142	0.168	0.000
ENGINEERING PERSONNEL	2.859	0.272	4.159	0.614	0.031	1.036
Totals						
MAINTENANCE PERSONNEL	24.000	14.000	388.000	5.136	2.192	107.453
OPERATIONS PERSONNEL	23.000	0.000	0.000	4.679	0.000	0.000
HEALTH PHYSICS PERSONNEL	18.004	5.000	46.000	4.127	0.670	11.913
SUPERVISORY PERSONNEL	10.000	2.000	2.000	2.204	0.419	1.154
ENGINEERING PERSONNEL	11.000	4.007	19.993	2.551	0.759	4.059
Grand Totals	86.004	25.007	455.993	18.697	4.040	124.579

* The man-rem totals include dose only from individuals receiving more than 100 mrem throughout the year at the site.